UI Bulletin #142b

Subject:	Diesel Particulate Filter [DPF] Manual Regeneration [cleaning]
Models Years Affected:	2018 and beyond
Models Affected:	Chevrolet Silverado GMC Sierra w/L5P Engine and RPO - FPF
Origination Date:	October 12, 2017
Revision Date:	August 22, 2018

ADVISORY:

Condition/Concern:

Trucks with diesel engines Diesel Particulate Filters require periodic DPF regeneration events. Sometimes these needed regeneration [cleaning] events can not be automatically initiated and/or completed due to slow speed operation, stop and go driving, extended idling or stationary PTO operation.

Repair/Recommendation:

On commercial vehicles that are equipped with RPO code **FPF** there is a feature that allows for manual cleaning/regeneration of the Diesel Particulate Filter (DPF) when it is unable to clean itself. It may be necessary to perform a manual regeneration if driving conditions prevent DPF self-cleaning.

Additional Information:

The progression of soot levels in the DPF will be as follows:

- **At 90% soot level**
  [a] If the vehicle is moving there are no DIC messages and the system will attempt automatic regen [conditions permitting]. If this regen is interrupted and conditions again become right the system will again initiate automatic regen. The DPF will clean itself if the vehicle can be driven above 50 km/h (30 mph) for about 30 minutes.
  [b] If the vehicle is stationary [in park] the system will indicate that manual regen is *'available.'*

- **At 115% soot level**
  [a] If the vehicle is moving there are no DIC messages but the system will attempt automatic regen [conditions permitting]. If this regen is interrupted and conditions again become right the system will again initiate automatic regen. However if the required conditions for automatic cleaning/regeneration are not present or do not remain long enough for

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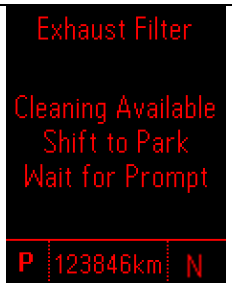
completion of the cleaning you may see messages that require operator attention/intervention.
[b] If the vehicle is stationary [in park] the system will indicate that manual regen is *'required.'*

- **At 140% soot level**
  [a] Vehicle moving - the system will attempt automatic regen and if the vehicle slows or stops the system will display "keep driving" – *a last warning*.
  [b] Vehicle stationary – If this level is reached at some time after the vehicle is stationary and still running the system will illuminate the *check engine light* and go into reduced power mode.

90% soot level - details

[a] If the vehicle is moving there are no DIC messages and the system will attempt automatic regen [conditions permitting]. If this regen is interrupted and conditions again become right the system will again initiate automatic regen. The DPF will clean itself if the vehicle can be driven above 50 km/h (30 mph) for about 30 minutes.
[b] If the vehicle is stationary [in park] the system indicates that manual regeneration is *'available'.*

The Driver's Information Center (DIC) will display:

Fig 1 [Color Displays]	Fig 1M [Monochrome Display]
	

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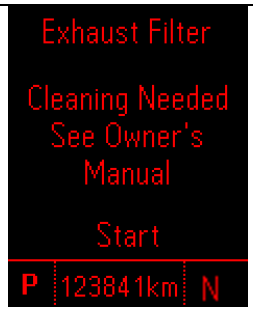
When shifting to park the Driver's Information Center (DIC) will display:

Fig 2 [Color Displays]	Fig 2M [Monochrome Display]
	

Warning:

- During DPF self cleaning or during extended idling in P (Park), the exhaust system and exhaust gases are very hot. Things thatburn could touch hot exhaust parts under the vehicle and ignite. You or others could be burned. Do not park, or idle for an extended period of time, near or over papers, leaves, dry grass, or other things that can burn. Keep the exhaust area clear of material that could ignite or burn.
- Do not leave the vehicle unattended during a manual regeneration.

The owner's manual will contains the steps below. *Before starting the manual regeneration, make sure all of the following safety conditions are met:*

- The vehicle is parked on level ground, away from any flammable materials.
- The vehicle is parked outdoors, away from any walls or buildings.
- The vehicle is at least 3 m (10 ft) from any obstructions or materials that may combust or melt.
- The shift lever is in P (Park).
- The fuel tank is at least one-eighth full.
- All fluids are at the proper level.
- No diagnostic trouble codes have been set, and the malfunction indicator lamp is not on.
- The engine coolant temperature is above 71 °C (160 °F).
- Your foot is not on the brake or on the throttle

Note:

If your truck is equipped with RPO PTO see www.gmupfitter.com Bulletin 120 for additional detail. After making sure all of the safety conditions have been met, press the trip odometer reset stem or < symbol for the check button> on the steering wheel control for at least one second to select 'Start' on the infotainment display.

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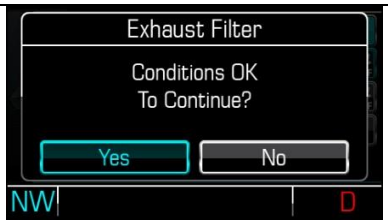
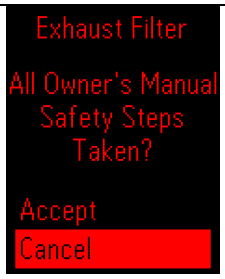
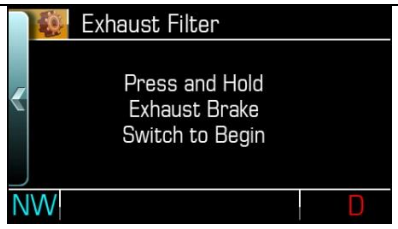
The Driver's Information Center (DIC) will display:

Fig 3 [Color Displays]	Fig 3M [Monochrome Display]
	

Note:

If the infotainment display returns to the previous screen, then one or more of the necessary operating conditions has not been met. If you cannot determine which condition has not been met, see www.gmupfitter.com to contact the GM Upfitter Integration Group for assistance.

When 'yes' is selected he Driver's Information Center (DIC) will display:

Fig 4 [Color Displays]	Fig 4M [Monochrome Display]
	

Hold the Exhaust Brake switch on the instrument panel [below the climate controls] for more than three seconds, and then release it, to begin the regeneration process. If the EXHAUST BRAKE ON message displays, then the switch was released too soon. Press it again to turn off the exhaust brake, then try again when the DIC message prompts.

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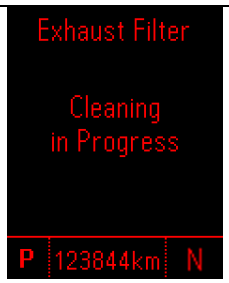
Note:

If an automatic regen had previously been initiated the system could take up to 4 minutes to acknowledge your 'Exhaust Brake Switch' input. When manual regeneration begins, the engine speed increases, the engine cooling fan sound increases, and a DIC message indicates that cleaning is in progress.

The Driver's Information Center (DIC) will display:

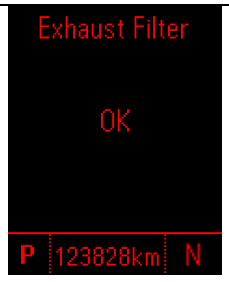
Fig 5 [Color Displays]	Fig 5M [Monochrome Display]
	

Warning:

Do not leave the vehicle unattended during the Manual Regeneration.

The Driver Information Center DIC will display 'OK' will display when cleaning has completed.

The message will remain as long as cleaning is not necessary. Cleaning could take up to 30 minutes. Upon completion, the engine will return to normal idle, but exhaust components will remain hot for several minutes. Exercize caution if you need to move the vehicle before the exhaust has had time to cool. Manual regeneration can be canceled at any time by pressing the brake pedal or turning the engine off. Unusual noises may be heard if regeneration is interrupted.

Fig 6 [Color Displays]	Fig 6M [Monochrome Display]
	

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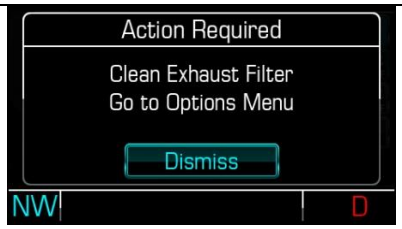
Note:

If the vehicle cannot be stopped when the DIC message first indicates cleaning is *available* or *required*, automatic self-cleaning may have begun. If conditions cannot be met for self-cleaning to complete, and manual regeneration is selected, it may take up to four minutes for the system to switch to manual regeneration. When the switch occurs, a DIC message prompts to start the cleaning process. Manual regeneration *can be initiated during* a PTO idle up session. It is strongly recommended that the exhaust filter be cleaned before continuous PTO usage if possible. If a manual regen is initiated during the PTO session the PTOM will retain control of the engine speed and the selected speed will not change as the regen event initiates. Low PTO engine speeds will cause regeneration to take longer. If your truck is equipped with RPO PTO see www.gmupfitter.com Bulletin 120 for additional detail.

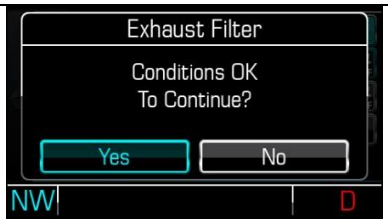
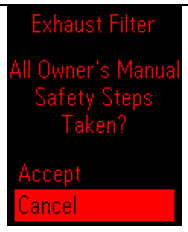
115% soot level details

[a] If the vehicle is moving there are no DIC messages but the system will attempt automatic regen [conditions permitting]. If this regen is interrupted and conditions again become right the system will again initiate automatic regen. However if the required conditions for automatic cleaning/regeneration are not present or do not remain long enough for completion of the cleaning you may see messages that require operator attention/intervention.
[b] If the vehicle is stationary [in park] the system will indicate that manual regen is *'required.'*

The Driver's Information Center (DIC) will display:

Fig 8 [Color Displays]	Fig 8M [Monochrome Display]
	

If 'dismiss' is not selected at the Options Menu the Driver's Information Center (DIC) will display:

Fig 3 [Color Displays]	Fig 3M [Monochrome Display]
	

All of the safety steps listed above in the '90% soot level details' section above should be followed.

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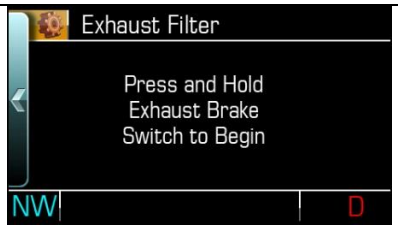
When 'yes' is selected the Driver's Information Center (DIC) will display:

Fig 4 [Color Displays]	Fig 4M [Monochrome Display]
	

Hold the Exhaust Brake switch on the instrument panel [below the climate controls] for more than three seconds, and then release it, to begin the regeneration process. If the EXHAUST BRAKE ON message displays, then the switch was released too soon. Press it again to turn off the exhaust brake, then try again when the DIC message prompts.

Note:

If an automatic regen had previously been initiated the system could take up to 4 minutes to acknowledge your 'Exhaust Brake Switch' input. When manual regeneration begins, the engine speed increases, the engine cooling fan sound increases, and a DIC message indicates that cleaning is in progress.

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	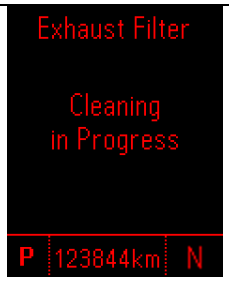

Warning:

Do not leave the vehicle unattended during the Manual Regeneration.

A DIC message 'OK' will display when cleaning has completed. The message will remain as long as cleaning is not necessary. Cleaning could take up to 30 minutes. Upon completion, the engine will return to normal idle, but exhaust components will remain hot for several minutes. Exercize caution if you need to move the vehicle before the exhaust has had time to cool. Manual regeneration can be canceled at any time by pressing the brake pedal or turning the engine off. Unusual noises may be heard if regeneration is interrupted.

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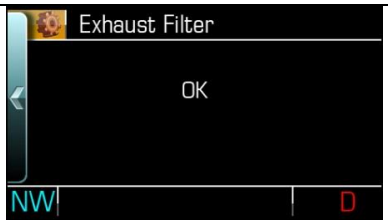
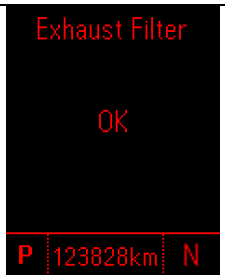
When the cleaning is completed the Driver's Information Center (DIC) will display:

Fig 6 [Color Displays]	Fig 6M [Monochrome Display]
	

Note:

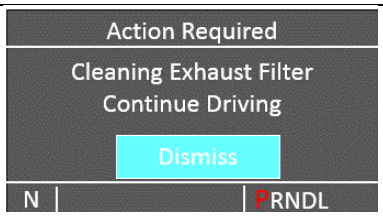
If the vehicle cannot be stopped when the DIC message first indicates cleaning is *available* or *required*, automatic self-cleaning may have begun. If conditions cannot be met for self-cleaning to complete, and manual regeneration is selected, it may take up to four minutes for the system to switch to manual regeneration. When the switch occurs, a DIC message prompts to start the cleaning process.

Manual regeneration can be initiated during a PTO idle up session. It is strongly recommended that the exhaust filter be cleaned before continuous PTO usage if possible. If a manual regen is initiated during the PTO session the PTOM will retain control of the engine speed and the selected speed will not change as the regen event initiates. Low PTO engine speeds will cause regeneration to take longer. If your truck is equipped with RPO PTO see www.gmupfitter.com Bulletin 120 for additional detail.

140% soot level details

[a] Vehicle moving - the system will attempt automatic regen and if the vehicle slows or stops the system will display "keep driving" – a last warning.

The Driver's Information Center (DIC) will display:

Fig 7 [Color Displays]	Fig 7M [Monochrome Display]
	

No stationary regen options remain at this time. If soot levels are allowed to go higher than 140% soot level a check engine light will be displayed and the engine will go into reduced power. At this point only a dealer can clean the DPF and restore normal operation. The DPF will clean itself if the vehicle can be driven

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above 50 km/h (30 mph) for about 30 minutes. However if the required conditions for automatic regeneration are not maintained long enough the message will repeat until regen is complete.

[b] Vehicle stationary [in park] – If soot levels are allowed to go higher than 140% soot level a check engine light will be displayed and the engine will go into reduced power. At this point only a dealer can clean the DPF and restore normal operation.

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